

A process for the wet chemical treatment of semiconductor wafers with treatment liquids in baths, comprising the steps of

firstly treating the semiconductor wafers in a bath with an aqueous HF solution only containing HF and optionally HCl and optionally a surfactant;

then treating the semiconductor wafers in a bath with an aqueous O₃ solution only containing O₃ and optionally HF;
and

then treating the semiconductor wafers in a bath with an aqueous HCl solution only containing HCl and optionally O₃;

whereby these treatment steps form a treatment sequence B₂, which avoids rinsing with water or another treatment liquid and the addition of fresh water or other liquids to the treatment baths.

11. (Twice Amended) A process for the wet chemical

treatment of semiconductor wafers with treatment liquids in

baths, comprising the steps of

firstly treating the semiconductor wafers in a bath with an aqueous HF solution only containing HF and optionally HCl and optionally a surfactant;

then treating the semiconductor wafers in a bath with an aqueous O₃ solution only containing O₃ and optionally HF; and

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then treating the semiconductor wafers in a bath with an aqueous HCl solution only containing HCl and optionally O₃, with exposure to megasonic waves,

whereby these treatment steps form a treatment sequence B₂, which avoids rinsing with water or another treatment liquid and the addition of fresh water or other liquids to the treatment baths.